

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 C.F.R. part 136, or another method required for an industry-specific waste stream under 40 C.F.R. subchapters N or O, the results of such monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Central Valley Water Board. (40 C.F.R. § 122.41(l)(4)(ii))
4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order. (40 C.F.R. § 122.41(l)(4)(iii))

D. Compliance Schedules

Reports of compliance or non-compliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date. (40 C.F.R. § 122.41(l)(5))

E. Twenty-Four Hour Reporting

1. The Discharger shall report any non-compliance which may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A report shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The report shall contain a description of the non-compliance and its cause; the period of non-compliance, including exact dates and times, and if the non-compliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the non-compliance.

For non-compliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports must include the data described above (with the exception of time of discovery) as well as the type of event (combined sewer overflows, sanitary sewer overflows, or bypass events), type of sewer overflow structure (e.g., manhole, combined sewer overflow outfall), discharge volumes untreated by the treatment works treating domestic sewage, types of human health and environmental impacts of the sewer overflow event, and whether the non-compliance was related to wet weather.

As of 21 December 2020, all reports related to combined sewer overflows, sanitary sewer overflows, or bypass events must be submitted electronically to the initial recipient (State Water Board) defined in Standard Provisions – Reporting V.J. The reports shall comply with 40 C.F.R. part 3. The may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 122.41(l)(6)(i))

F. Planned Changes

The Discharger shall give notice to the Central Valley Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when (40 C.F.R. § 122.41(l)(1)):

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in section 122.29(b) (40 C.F.R. § 122.41(l)(1)(i)); or
2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants that are not subject to effluent limitations in this Order. (40 C.F.R. § 122.41(l)(1)(ii))

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The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan.
(40 C.F.R. § 122.41(l)(1)(iii))

G. Anticipated Non-compliance

The Discharger shall give advance notice to the Central Valley Water Board of any planned changes in the permitted facility or activity that may result in non-compliance with this Order's requirements. (40 C.F.R. § 122.41(l)(2))

H. Other Non-compliance

The Discharger shall report all instances of non-compliance not reported under Standard Provisions – Reporting V.C, V.D, and V.E above at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E above. For non-compliance events related to combined sewer overflows, sanitary sewer overflows, or bypass events, these reports shall contain the information described in Standard Provision – Reporting V.E and the applicable required data in appendix A to 40 C.F.R. part 127. The Central Valley Water Board may also require the Discharger to electronically submit reports not related to combined sewer overflows, sanitary sewer overflows, or bypass events under this section. (40 C.F.R. § 122.41(l)(7))

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Central Valley Water Board, State Water Board, or U.S. EPA, the Discharger shall promptly submit such facts or information. (40 C.F.R. § 122.41(l)(8))

J. Initial Recipient for Electronic Reporting Data

The owner, operator, or the duly authorized representative is required to electronically submit NPDES information specified in appendix A to 40 C.F.R. part 127 to the appropriate initial recipient, as determined by U.S. EPA, and as defined in 40 C.F.R. section 127.2(b). U.S. EPA will identify and publish the list of initial recipients on its website and in the Federal Register, by state and by NPDES data group [see 40 C.F.R. section 127.2(c)]. U.S. EPA will update and maintain this listing. (40 C.F.R. § 122.41(l)(9))

VI. STANDARD PROVISIONS – ENFORCEMENT

- A.** The Central Valley Water Board is authorized to enforce the terms of this permit under several provisions of the Water Code, including, but not limited to, sections 13385, 13386, and 13387.

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Publicly-Owned Treatment Works (POTW's)

All POTW's shall provide adequate notice to the Central Valley Water Board of the following (40 C.F.R. § 122.42(b)):

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to sections 301 or 306 of the CWA if it were directly discharging those pollutants (40 C.F.R. § 122.42(b)(1)); and

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2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order. (40 C.F.R. § 122.42(b)(2))
3. Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.
(40 C.F.R. § 122.42(b)(3))

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM

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ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (40 C.F.R. § 122.48) requires that all National Pollutant Discharge Elimination System (NPDES) permits specify monitoring and reporting requirements. Water Code sections 13267 and 13383 also authorize the Central Valley Water Board to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement federal and California regulations.

I. GENERAL MONITORING PROVISIONS

- A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of the Central Valley Water Board.
- B. Final effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.
- C. Chemical, bacteriological, and bioassay analyses of any material required by this Order shall be conducted by a laboratory accredited for such analyses by the State Water Resources Control Board (State Water Board), Division of Drinking Water (DDW; formerly the Department of Public Health). Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Central Valley Water Board. In the event an accredited laboratory is not available to the Discharger for any on-site field measurements such as pH, dissolved oxygen, turbidity, temperature, and residual chlorine, such analyses performed by a non-accredited laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program for any on-site field measurements such as pH, dissolved oxygen, turbidity, temperature, and residual chlorine must be kept on-site in the Facility laboratory and shall be available for inspection by Central Valley Water Board staff. The Discharger must demonstrate sufficient capability (qualified and trained employees, properly calibrated and maintained field instruments, etc.) to adequately perform these field measurements. The Quality Assurance-Quality Control Program must conform to U.S. EPA guidelines or to procedures approved by the Central Valley Water Board.
- D. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.
- E. Monitoring results, including non-compliance, shall be reported at intervals and in a manner specified in this MRP.
- F. Laboratories analyzing monitoring samples shall be accredited by DDW, in accordance with the provision of Water Code section 13176, and must include quality assurance/quality control data with their reports.
- G. The Discharger shall ensure that the results of the Discharge Monitoring Report-Quality Assurance (DMR-QA) Study or the most recent Water Pollution Performance Evaluation Study are submitted annually to the State Water Board at the following address:

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State Water Resources Control Board
Quality Assurance Program Officer
Office of Information Management and Analysis
1001 I Street, Sacramento, CA 95814

- H. The Discharger shall file with the Central Valley Water Board technical reports on self-monitoring performed according to the detailed specifications contained in this MRP.
- I. The results of all monitoring required by this Order shall be reported to the Central Valley Water Board and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order. Unless otherwise specified, discharge flows shall be reported in terms of the monthly average and the daily maximum discharge flows.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Table E-1. Monitoring Station Locations

Discharge Point Name	Monitoring Location Name	Monitoring Location Description
--	INF-001	A location where a representative sample of the influent into the Facility can be collected prior to entering into the treatment process.
001	EFF-001	A location where a representative sample of the effluent from the Facility can be collected downstream from the last connection through which wastes can be admitted to the outfall before being discharged to the Collierville Tunnel. Latitude: 38° 09' 41" N, Longitude: 120° 24' 51" W
--	RSW-001	North Fork Stanislaus River, at the diversion point from McKays Point Reservoir to the Collierville Tunnel.
--	PND-001	Within the Forest Meadows Golf Course storage reservoir.
--	FIL-001	A location where a representative sample of the effluent from the tertiary filtration system can be collected immediately downstream of the filters and prior to the ultraviolet light (UV) disinfection system.
--	UVS-001	A location where a representative sample of wastewater can be collected immediately downstream of the UV disinfection system.

The North latitude and West longitude information in Table E-1 are approximate for administrative purposes.

III. INFLUENT MONITORING REQUIREMENTS

A. Monitoring Location INF-001

- 1. The Discharger shall monitor influent to the Facility at Monitoring Location INF-001 as follows:

Table E-2. Influent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	Meter	Continuous	--
Conventional Pollutants				
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	24-hr Composite ¹	1/Week	²

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
pH	standard units	Meter	1/Week	2
Total Suspended Solids	mg/L	24-hr Composite ¹	1/Week	2

¹ 24-hour flow proportional composite.

² Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods requested by the Discharger that have been approved by the Central Valley Water Board or the State Water Board.

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location EFF-001

- When discharging to surface water, the Discharger shall monitor tertiary treated effluent at Monitoring Location EFF-001 as follows. If more than one analytical test method is listed for a given parameter, the Discharger must select from the listed methods and corresponding Minimum Level (ML):

Table E-3. Effluent Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	MGD	Meter	Continuous	--
Conventional Pollutants				
Biochemical Oxygen Demand (5-day @ 20° C)	mg/L	24-hr Composite ¹	3/Week	2
pH	standard units	Meter	Continuous ³	2
Total Suspended Solids	mg/L	24-hr Composite ¹	3/Week	2
Priority Pollutants				
Copper, Total Recoverable	µg/L	Grab	1/Month	2,4
Zinc, Total Recoverable	µg/L	Grab	1/Month	2,4
Non-Conventional Pollutants				
Ammonia Nitrogen, Total (as N)	mg/L	Grab	1/Month ^{3,5}	2
	lbs/day	Calculate	1/Month	--
Chlorine, Total Residual	mg/L	Grab	1/Day ⁶	2
Dissolved Oxygen	mg/L	Grab	1/Day	2
Electrical Conductivity @ 25°C	µmhos/cm	Grab	1/Month	2
Hardness, Total (as CaCO ₃)	mg/L	Grab	1/Month ⁷	2
Nitrate Plus Nitrite, Total (as N)	mg/L	Calculate	1/Month	2
Temperature	°F	Grab	1/Month ^{3,8}	2

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Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
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- 1 24-hour flow proportional composite.
 - 2 Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods requested by the Discharger that have been approved by the Central Valley Water Board or the State Water Board.
 - 3 pH and temperature shall be recorded at the time of ammonia sample collection.
 - 4 For priority pollutant constituents, the reporting level (RL) shall be consistent with sections 2.4.2 and 2.4.3 of the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (See Attachment E, section IX.B).
 - 5 Concurrent with whole effluent toxicity (WET) monitoring.
 - 6 Total chlorine residual must be monitored with a method sensitive to and accurate at the permitted level of 0.01 mg/L. Total chlorine residual monitoring is only required when chlorine or chlorine-containing products are used in the treatment process for maintenance purposes (monitoring is not required for the use of chlorinated potable water for filter backwashing). When chlorine or chlorine-containing products are not in use in the treatment process, the Discharger shall so state in the monthly self-monitoring report (SMR).
 - 7 Hardness samples shall be collected concurrently with metals samples.
 - 8 A hand-held field meter may be used, provided the meter utilizes a U.S. EPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions. A calibration and maintenance log for each meter used for monitoring required by this MRP shall be maintained at the Facility.
2. If the discharge is intermittent rather than continuous, then on the first day of each such intermittent discharge, the Discharger shall monitor and record for all of the constituents listed above, after which the frequencies of analysis given in the schedule shall apply for the duration of each such intermittent discharge. In no event shall the Discharger be required to monitor and record data more often than twice the frequencies listed in the schedule.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS

- A. **Acute Toxicity Testing.** The Discharger shall conduct acute toxicity testing to determine whether the effluent is contributing acute toxicity to the receiving water. The Discharger shall meet the following acute toxicity testing requirements:
 1. Monitoring Frequency – The Discharger shall perform annual acute toxicity testing, concurrent with effluent ammonia sampling.
 2. Sample Types – The Discharger may use flow-through or static renewal testing. For static renewal testing, the samples shall be grab samples and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at Monitoring Location EFF-001.
 3. Test Species – Test species shall be rainbow trout (*Oncorhynchus mykiss*).
 4. Methods – The acute toxicity testing samples shall be analyzed using EPA-821-R-02-012, Fifth Edition. Temperature, total residual chlorine, and pH shall be recorded at the time of sample collection. No pH adjustment may be made unless approved by the Executive Officer.
 5. Test Failure – If an acute toxicity test does not meet all test acceptability criteria, as specified in the test method, the Discharger must re-sample and re-test as soon as possible, not to exceed 7 days following notification of test failure.
- B. **Chronic Toxicity Testing.** The Discharger shall meet the following chronic toxicity testing requirements:

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1. Monitoring Frequency – The Discharger shall perform routine annual chronic toxicity testing. If the result of the routine chronic toxicity testing event exhibits toxicity, demonstrated by a result greater than 25 TUC (as 100/EC₂₅), the Discharger has the option of conducting two additional compliance monitoring events and performing chronic toxicity testing using the species that exhibited toxicity in order to calculate a median. The optional compliance monitoring events shall occur at least 1 week apart, and the final monitoring event shall be initiated no later than 6 weeks from the routine monitoring event that exhibited toxicity.
2. Sample Types – Effluent samples shall be grab samples and shall be representative of the volume and quality of the discharge. The effluent samples shall be taken at Monitoring Location EFF-001. The receiving water control shall be a grab sample obtained from Monitoring Location RSW-001, as identified in this MRP.
3. Sample Volumes – Adequate sample volumes shall be collected to provide renewal water to complete the test in the event that the discharge is intermittent.
4. Test Species – Chronic toxicity testing measures sublethal (e.g., reduced growth, reproduction) and/or lethal effects to test organisms exposed to an effluent compared to that of the control organisms. The Discharger shall conduct chronic toxicity tests with:
 - a. The cladoceran, water flea, *Ceriodaphnia dubia* (survival and reproduction test);
 - b. The fathead minnow, *Pimephales promelas* (larval survival and growth test); and
 - c. The green alga, *Selenastrum capricornutum* (growth test).
5. Methods – The presence of chronic toxicity shall be estimated as specified in *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms, Fourth Edition*, EPA/821-R-02-013, October 2002 (Method Manual).
6. Reference Toxicant – As required by the SIP, all chronic toxicity tests shall be conducted with concurrent testing with a reference toxicant and shall be reported with the chronic toxicity test results.
7. Dilutions – For routine and compliance chronic toxicity monitoring, the chronic toxicity testing shall be performed using the dilution series identified in Table E-4, below. For Toxicity Reduction Evaluation (TRE) monitoring, the chronic toxicity testing shall be performed using the dilution series identified in Table E-4, below, unless an alternative dilution series is detailed in the submitted TRE Action Plan. A receiving water control or laboratory water control may be used as the diluent.

Table E-4. Chronic Toxicity Testing Dilution Series

Sample	Dilutions ¹ (%)					Control	
	16	8.0	4.0	2.0	1.0		
% Effluent	16	8.0	4.0	2.0	1.0	0	100
% Control Water	84	92	96	98	99	100	0

¹ Receiving water control or laboratory water control may be used as the diluent.

8. Test Failure – The Discharger must re-sample and re-test as soon as possible, but no later than 14 days after receiving notification of a test failure. A test failure is defined as follows:
 - a. The reference toxicant test or the effluent test does not meet all test acceptability criteria as specified in the Method Manual, and its subsequent amendments or revisions; or

- b. The percent minimum significant difference (PMSD) measured for the test exceeds the upper PMSD bound variability criterion in the Method Manual.
- C. **WET Testing Notification Requirements.** The Discharger shall notify the Central Valley Water Board within 24 hours after the receipt of test results exceeding the monitoring trigger during regular or accelerated monitoring, or an exceedance of the acute toxicity effluent limitation.
- D. **WET Testing Reporting Requirements.** All toxicity test reports shall include the contracting laboratory's complete report provided to the Discharger and shall be in accordance with the appropriate "Report Preparation and Test Review" sections of the method manuals. At a minimum, WET monitoring shall be reported as follows:

- 1. **Chronic WET Reporting.** Routine and compliance chronic toxicity monitoring results shall be reported to the Central Valley Water Board with the SMR required to be submitted on the first day of the second calendar month following the month of sampling, and shall contain, at minimum:
 - a. The results expressed in TUC, measured as 100/NOEC, and also measured as 100/LC₅₀, 100/EC₂₅, 100/IC₂₅, and 100/IC₅₀, as appropriate;
 - b. The statistical methods used to calculate endpoints;
 - c. The statistical output page, which includes the calculation of the PMSD;
 - d. The dates of sample collection and initiation of each toxicity test; and
 - e. The results compared to the numeric toxicity monitoring trigger.

Additionally, the monthly SMR's shall contain an updated chronology of chronic toxicity test results expressed in TUC, and organized by test species, type of test (survival, growth or reproduction), and monitoring type, i.e., routine, compliance, TES, or TRE monitoring.

- 2. **Acute WET Reporting.** Acute toxicity test results shall be submitted with the monthly SMR's and reported as percent survival.
- 3. **TRE Reporting.** Reports for TRE's shall be submitted in accordance with the schedule contained in the Discharger's approved TRE Work Plan, or as amended by the Discharger's TRE Action Plan.
- 4. **Quality Assurance (QA).** The Discharger must provide the following information for QA purposes:
 - a. Results of the applicable reference toxicant data with the statistical output page giving the species, NOEC, LOEC, type of toxicant, dilution water used, concentrations used, PMSD, and dates tested.
 - b. The reference toxicant control charts for each endpoint, which include summaries of reference toxicant tests performed by the contracting laboratory.
 - c. Any information on deviations or problems encountered and how they were dealt with.

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

Land discharge monitoring requirements are included in separate WDR Order 5-00-066 (as amended by Order R5-2010-0078).

VII. RECYCLING MONITORING REQUIREMENTS

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A. Monitoring Location PND-001

1. During periods of discharge to the Collierville Tunnel, the Discharger shall monitor the Forest Meadows Golf Course storage reservoir as follows:

Table E-5. Recycling Monitoring

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Freeboard	Feet	Measurement	1/Week	--

VIII. RECEIVING WATER MONITORING REQUIREMENTS – NOT APPLICABLE

IX. OTHER MONITORING REQUIREMENTS

A. Filtration System and Ultraviolet Light (UV) Disinfection System

1. Monitoring Locations FIL-001 and UVS-001

- a. The Discharger shall monitor the filtration system at Monitoring Location FIL-001 and the UV disinfection system at Monitoring Location UVS-001 as follows:

Table E-6. Filtration System and UV Disinfection System Monitoring

Parameter	Units	Sample Type	Monitoring Location	Minimum Sampling Frequency
Flow	MGD	Meter	UVS-001	Continuous ¹
Turbidity ²	NTU	Meter	FIL-001	Continuous ^{1,3}
Number of UV banks in operation	Number	Observation	N/A	Continuous ¹
UV Transmittance	Percent (%)	Meter	UVS-001	Continuous ¹
UV Dose ⁴	mJ/cm ²	Calculate	N/A	Continuous ¹
Total Coliform Organisms ²	MPN/100 mL	Grab	UVS-001	2/Week

¹ For continuous analyzers, the Discharger shall report documented routine meter maintenance activities including date, time of day, and duration, in which the analyzer(s) is not in operation. If analyzer(s) fail to provide continuous monitoring for more than 2 hours and influent and/or effluent from the disinfection process is not diverted for retreatment, the Discharger shall obtain and report hourly manual and/or grab sample results. The Discharger shall not decrease power settings or reduce the number of UV lamp banks in operation while the continuous analyzers are out of service and water is being disinfected.

² Pollutants shall be analyzed using the analytical methods described in 40 C.F.R. part 136 or by methods approved by the Central Valley Water Board or the State Water Board.

³ Report daily average and maximum turbidity.

⁴ Report daily minimum hourly average UV dose and daily average UV dose. The minimum hourly average dose shall consist of lowest hourly average dose provided in any channel that had at least one bank of lamps operating during the hour interval. For channels that did not operate for the entire hour interval, the dose will be averaged based on the actual operation time.

B. Effluent and Receiving Water Characterization

1. **Monitoring.** Samples shall be collected from the effluent and upstream receiving water (Monitoring Locations EFF-001 and RSW-001) and analyzed for the constituents listed in Table E-7, below. Monitoring shall be conducted three times during the year 2020, in January, March, and May, and the results of such monitoring shall be submitted to the Central Valley Water Board with the monthly SMR's. Each individual monitoring event shall provide representative sample results for the effluent and upstream receiving water.
2. **Concurrent Sampling.** Effluent and receiving water sampling shall be performed at approximately the same time, on the same date.

3. **Sample Type.** All receiving water samples shall be taken as grab samples. Effluent samples shall be taken as described in Table E-7, below.

Table E-7. Effluent and Receiving Water Characterization Monitoring

Parameter	Units	Effluent Sample Type	Maximum Reporting Level ¹
2-Chloroethyl vinyl ether	µg/L	Grab	1
Acrolein	µg/L	Grab	2
Acrylonitrile	µg/L	Grab	2
Benzene	µg/L	Grab	0.5
Bromoform	µg/L	Grab	0.5
Carbon Tetrachloride	µg/L	Grab	0.5
Chlorobenzene	µg/L	Grab	0.5
Chloroethane	µg/L	Grab	0.5
Chloroform	µg/L	Grab	2
Chloromethane	µg/L	Grab	2
Dibromochloromethane	µg/L	Grab	0.5
Dichlorobromomethane	µg/L	Grab	0.5
Dichloromethane	µg/L	Grab	2
Ethylbenzene	µg/L	Grab	2
Hexachlorobenzene	µg/L	Grab	1
Hexachlorobutadiene	µg/L	Grab	1
Hexachloroethane	µg/L	Grab	1
Methyl bromide (Bromomethane)	µg/L	Grab	1
Naphthalene	µg/L	Grab	10
3-Methyl-4-Chlorophenol	µg/L	Grab	--
Tetrachloroethene	µg/L	Grab	0.5
Toluene	µg/L	Grab	2
trans-1,2-Dichloroethylene	µg/L	Grab	1
Trichloroethene	µg/L	Grab	2
Vinyl chloride	µg/L	Grab	0.5
Methyl-tert-butyl ether (MTBE)	µg/L	Grab	--
Trichlorofluoromethane	µg/L	Grab	--
1,1,1-Trichloroethane	µg/L	Grab	0.5
1,1,2-Trichloroethane	µg/L	Grab	0.5
1,1-dichloroethane	µg/L	Grab	0.5
1,1-dichloroethylene	µg/L	Grab	0.5
1,2-dichloropropane	µg/L	Grab	0.5
1,3-dichloropropylene	µg/L	Grab	0.5
1,1,2,2-tetrachloroethane	µg/L	Grab	0.5
1,2,4-trichlorobenzene	µg/L	Grab	1
1,2-dichloroethane	µg/L	Grab	0.5
1,2-dichlorobenzene	µg/L	Grab	0.5
1,3-dichlorobenzene	µg/L	Grab	0.5
1,4-dichlorobenzene	µg/L	Grab	0.5
1,2-Benzanthracene	µg/L	Grab	5
1,2-Diphenylhydrazine	µg/L	Grab	1
2-Chlorophenol	µg/L	Grab	5
2,4-Dichlorophenol	µg/L	Grab	5
2,4-Dimethylphenol	µg/L	Grab	2
2,4-Dinitrophenol	µg/L	Grab	5
2,4-Dinitrotoluene	µg/L	Grab	5

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Parameter	Units	Effluent Sample Type	Maximum Reporting Level ¹
2,4,6-Trichlorophenol	µg/L	Grab	10
2,6-Dinitrotoluene	µg/L	Grab	5
2-Nitrophenol	µg/L	Grab	10
2-Chloronaphthalene	µg/L	Grab	10
3,3'-Dichlorobenzidine	µg/L	Grab	5
3,4-Benzofluoranthene	µg/L	Grab	10
4-Chloro-3-methylphenol	µg/L	Grab	5
4,6-Dinitro-2-methylphenol	µg/L	Grab	10
4-Nitrophenol	µg/L	Grab	10
4-Bromophenyl phenyl ether	µg/L	Grab	10
4-Chlorophenyl phenyl ether	µg/L	Grab	5
Acenaphthene	µg/L	Grab	1
Acenaphthylene	µg/L	Grab	10
Anthracene	µg/L	Grab	10
Benidine	µg/L	Grab	5
Benzo(a)pyrene (3,4-Benzopyrene)	µg/L	Grab	2
Benzo(g,h,i)perylene	µg/L	Grab	5
Benzo(k)fluoranthene	µg/L	Grab	2
Bis(2-chloroethoxy) methane	µg/L	Grab	5
Bis(2-chloroethyl) ether	µg/L	Grab	1
Bis(2-chloroisopropyl) ether	µg/L	Grab	10
Bis(2-ethylhexyl) phthalate ²	µg/L	Grab	5
Butyl benzyl phthalate	µg/L	Grab	10
Chrysene	µg/L	Grab	5
Di-n-butylphthalate	µg/L	Grab	10
Di-n-octylphthalate	µg/L	Grab	10
Dibenzo(a,h)-anthracene	µg/L	Grab	0.1
Diethyl phthalate	µg/L	Grab	10
Dimethyl phthalate	µg/L	Grab	10
Fluoranthene	µg/L	Grab	10
Fluorene	µg/L	Grab	10
Hexachlorocyclopentadiene	µg/L	Grab	5
Indeno(1,2,3-c,d)pyrene	µg/L	Grab	0.05
Isophorone	µg/L	Grab	1
N-Nitrosodiphenylamine	µg/L	Grab	1
N-Nitrosodimethylamine	µg/L	Grab	5
N-Nitrosodi-n-propylamine	µg/L	Grab	5
Nitrobenzene	µg/L	Grab	10
Pentachlorophenol	µg/L	Grab	1
Phenanthrene	µg/L	Grab	5
Phenol	µg/L	Grab	1
Pyrene	µg/L	Grab	10
Aluminum	µg/L	24-hr Composite ³	--
Antimony	µg/L	24-hr Composite ³	5
Arsenic	µg/L	24-hr Composite ³	10
Asbestos	MFL	24-hr Composite ³	--
Beryllium	µg/L	24-hr Composite ³	2
Cadmium	µg/L	24-hr Composite ³	0.5
Chromium (Total)	µg/L	24-hr Composite ³	50
Chromium (VI)	µg/L	24-hr Composite ³	10

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Parameter	Units	Effluent Sample Type	Maximum Reporting Level ¹
Copper ⁴	µg/L	24-hr Composite ³	0.5
Cyanide	µg/L	24-hr Composite ³	5
Fluoride	µg/L	24-hr Composite ³	--
Iron	µg/L	24-hr Composite ³	--
Lead	µg/L	24-hr Composite ³	0.5
Mercury	µg/L	Grab	0.5
Manganese	µg/L	24-hr Composite ³	--
Nickel	µg/L	24-hr Composite ³	5
Selenium	µg/L	24-hr Composite ³	5
Silver	µg/L	24-hr Composite ³	0.25
Thallium	µg/L	24-hr Composite ³	1
Zinc ⁴	µg/L	24-hr Composite ³	10
4,4'-DDD	µg/L	24-hr Composite ³	0.05
4,4'-DDE	µg/L	24-hr Composite ³	0.05
4,4'-DDT	µg/L	24-hr Composite ³	0.01
alpha-Endosulfan	µg/L	24-hr Composite ³	0.02
alpha-Hexachlorocyclohexane (BHC)	µg/L	24-hr Composite ³	0.01
Aldrin	µg/L	24-hr Composite ³	0.005
beta-Endosulfan	µg/L	24-hr Composite ³	0.01
beta-Hexachlorocyclohexane	µg/L	24-hr Composite ³	0.005
Chlordane	µg/L	24-hr Composite ³	0.1
delta-Hexachlorocyclohexane	µg/L	24-hr Composite ³	0.005
Dieldrin	µg/L	24-hr Composite ³	0.01
Endosulfan sulfate	µg/L	24-hr Composite ³	0.01
Endrin	µg/L	24-hr Composite ³	0.01
Endrin Aldehyde	µg/L	24-hr Composite ³	0.01
Heptachlor	µg/L	24-hr Composite ³	0.01
Heptachlor Epoxide	µg/L	24-hr Composite ³	0.02
Lindane (gamma-Hexachlorocyclohexane)	µg/L	24-hr Composite ³	0.5
PCB-1016	µg/L	24-hr Composite ³	0.5
PCB-1221	µg/L	24-hr Composite ³	0.5
PCB-1232	µg/L	24-hr Composite ³	0.5
PCB-1242	µg/L	24-hr Composite ³	0.5
PCB-1248	µg/L	24-hr Composite ³	0.5
PCB-1254	µg/L	24-hr Composite ³	0.5
PCB-1260	µg/L	24-hr Composite ³	0.5
Toxaphene	µg/L	24-hr Composite ³	--
2,3,7,8-TCDD (Dioxin)	µg/L	24-hr Composite ³	--
Ammonia (as N) ⁴	mg/L	24-hr Composite ³	--
Boron	µg/L	24-hr Composite ³	--
Chloride	mg/L	24-hr Composite ³	--
Flow ⁴	MGD	Meter	--
Hardness (as CaCO ₃) ⁴	mg/L	Grab	--
Foaming Agents (MBAS)	µg/L	24-hr Composite ³	--
Mercury, Methyl	ng/L	Grab	--
Nitrate (as N) ⁴	mg/L	24-hr Composite ³	--
Nitrite (as N) ⁴	mg/L	24-hr Composite ³	--
pH ⁴	standard units	Grab	--

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Parameter	Units	Effluent Sample Type	Maximum Reporting Level ¹
Phosphorus, Total (as P)	mg/L	24-hr Composite ³	--
Specific conductance (EC) ⁴	µmhos/cm	24-hr Composite ³	--
Sulfate	mg/L	24-hr Composite ³	--
Sulfide (as S)	mg/L	24-hr Composite ³	--
Sulfite (as SO ₃)	mg/L	24-hr Composite ³	--
Temperature ⁴	°C	Grab	--
Total Dissolved Solids	mg/L	24-hr Composite ³	--

¹ The reporting levels required in this table for priority pollutant constituents are established based on section 2.4.2 and Appendix 4 of the SIP.

² In order to verify if bis (2-ethylhexyl) phthalate is truly present, the Discharger shall take steps to assure that sample containers, sampling apparatus, and analytical equipment are not sources of the detected contaminant.

³ 24-hour flow proportional composite.

⁴ The Discharger is not required to conduct effluent monitoring for constituents that have already been sampled in a given month, as required in Table E-3 except for hardness, pH, and temperature, which shall be conducted concurrently with the effluent sampling.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements

1. The Discharger shall comply with all Standard Provisions (Attachment D) related to monitoring, reporting, and recordkeeping.
2. Upon written request of the Central Valley Water Board, the Discharger shall submit a summary monitoring report. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).
3. **Compliance Time Schedules.** For compliance time schedules included in the Order, the Discharger shall submit to the Central Valley Water Board, on or before each compliance due date, the specified document or a written report detailing compliance or non-compliance with the specific date and task. If non-compliance is reported, the Discharger shall state the reasons for non-compliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter when it returns to compliance with the compliance time schedule.
4. The Discharger shall report to the Central Valley Water Board any toxic chemical release data it reports to the State Emergency Response Commission within 15 days of reporting the data to the Commission pursuant to section 313 of the "*Emergency Planning and Community Right to Know Act*" of 1986.

B. Self-Monitoring Reports (SMR's)

1. The Discharger shall electronically submit SMR's using the State Water Board's California Integrated Water Quality System (CIWQS) Program website http://www.waterboards.ca.gov/water_issues/programs/ciwqs/. The CIWQS website will provide additional information for SMR submittal in the event there will be a planned service interruption for electronic submittal.
2. The Discharger shall report in the SMR the results for all monitoring specified in this MRP under sections III through IX. The Discharger shall submit monthly SMR's including the results of all required monitoring using U.S. EPA-approved test methods or other test methods specified in this Order. SMR's are to include all new monitoring results obtained since the last SMR was submitted. If the Discharger monitors any pollutant more

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frequently than required by this Order, the results of this monitoring shall be included in the calculations and reporting of the data submitted in the SMR. Monthly SMR's are required even if there is no discharge. If no discharge occurs during the month, the monitoring report must be submitted stating that there has been no discharge.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Table E-8. Monitoring Periods and Reporting Schedule

Sampling Frequency	Monitoring Period Begins On...	Monitoring Period	SMR Due Date
Continuous	Permit effective date	All	Submit with monthly SMR
1/Day	Permit effective date	(Midnight through 11:59 PM) or any 24-hour period that reasonably represents a calendar day for purposes of sampling.	Submit with monthly SMR
1/Week	Permit effective date	Sunday through Saturday	Submit with monthly SMR
2/Week	Permit effective date	Sunday through Saturday	Submit with monthly SMR
3/Week	Permit effective date	Sunday through Saturday	Submit with monthly SMR
1/Month	Permit effective date	1 st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling
1/Year	Permit effective date	1 January through 31 December	1 February of following year

4. **Reporting Protocols.** The Discharger shall report with each sample result the applicable RL and the current laboratory's Method Detection Limit (MDL), as determined by the procedure in 40 C.F.R. part 136.

The Discharger shall report the results of analytical determinations for the presence of chemical constituents in a sample using the following reporting protocols:

- a. Sample results greater than or equal to the RL shall be reported as measured by the laboratory (i.e., the measured chemical concentration in the sample).
- b. Sample results less than the RL, but greater than or equal to the laboratory's MDL, shall be reported as "Detected, but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.

For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ. The laboratory may, if such information is available, include numerical estimates of the data quality for the reported result. Numerical estimates of data quality may be percent accuracy (\pm a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.

- c. Sample results less than the laboratory's MDL shall be reported as "Not Detected," or ND.
- d. Dischargers are to instruct laboratories to establish calibration standards so that the ML value (or its equivalent if there is differential treatment of samples relative to

calibration standards) is the lowest calibration standard. At no time is the Discharger to use analytical data derived from extrapolation beyond the lowest point of the calibration curve.

5. **Multiple Sample Data.** When determining compliance with an average monthly effluent limitation (AMEL), average weekly effluent limitation (AWEL), or maximum daily effluent limitation (MDEL) for priority pollutants and more than one sample result is available, the Discharger shall compute the arithmetic mean unless the data set contains one or more reported determinations of DNQ or ND. In those cases, the Discharger shall compute the median in place of the arithmetic mean in accordance with the following procedure:
 - a. The data set shall be ranked from low to high, ranking the reported ND determinations lowest, DNQ determinations next, followed by quantified values (if any). The order of the individual ND or DNQ determinations is unimportant.
 - b. The median value of the data set shall be determined. If the data set has an odd number of data points, then the median is the middle value. If the data set has an even number of data points, then the median is the average of the two values around the middle unless one or both of the points are ND or DNQ, in which case the median value shall be the lower of the two data points where DNQ is lower than a value and ND is lower than DNQ.
6. The Discharger shall submit SMR's in accordance with the following requirements:
 - a. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the Facility is operating in compliance with interim and/or final effluent limitations. The Discharger is not required to duplicate the submittal of data that is entered in a tabular format within CIWQS. When electronic submittal of data is required and CIWQS does not provide for entry into a tabular format within the system, the Discharger shall electronically submit the data in a tabular format as an attachment.
 - b. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the waste discharge requirements (WDR's); discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.
 - c. The Discharger shall attach all laboratory analysis sheets, including quality assurance/quality control information, with all SMR's for which sample analyses were performed.
7. The Discharger shall submit in the SMR's calculations and reports in accordance with the following requirements:
 - a. **Mass Loading Limitations.** For ammonia, the Discharger shall calculate and report the mass loading (lbs/day) in the SMR's. The mass loading shall be calculated as follows:
$$\text{Mass Loading (lbs/day)} = \text{Flow (MGD)} \times \text{Concentration (mg/L)} \times 8.34$$

For weekly average mass loading, the weekly average flow and constituent concentration shall be used. For monthly average mass loading, the monthly average flow and constituent concentration shall be used.
 - b. **Removal Efficiency (BOD₅ and TSS).** The Discharger shall calculate and report the percent removal of BOD₅ and TSS in the SMR's. The percent removal shall be calculated as specified in section VII.A of the Waste Discharge Requirements.

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- c. **Total Coliform Organisms Effluent Limitations.** The Discharger shall calculate and report the 7-day median of total coliform organisms for the effluent. The 7-day median of total coliform organisms shall be calculated as specified in section VII.C of the Waste Discharge Requirements.

C. Discharge Monitoring Reports (DMR's)

DMR's are U.S. EPA reporting requirements. The Discharger shall electronically certify and submit DMR's together with SMR's using Electronic Self-Monitoring Reports module eSMR 2.5 or any upgraded version. Electronic DMR submittal will be in addition to electronic SMR submittal. Information about electronic DMR submittal is available at the DMR website at: http://www.waterboards.ca.gov/water_issues/programs/discharge_monitoring/.

D. Other Reports

1. **Special Study Technical Reports and Progress Reports.** Special Provisions contained in section VI of the Waste Discharge Requirements include requirements to submit special study technical reports and progress reports. Table E-9 summarizes the technical reports required by the Special Provisions and due dates for report submittal. All special study technical reports and progress reports shall be submitted electronically via CIWQS submittal. Reports should be uploaded as a PDF, Microsoft Word, or Microsoft Excel file attachment. If there are any discrepancies between the information presented in Table E-9 and the Special Provisions (section VI of the Waste Discharge Requirements), the information in the Special Provisions shall supersede the information in Table E-9.

Table E-9. Reporting Requirements for Special Provisions Reports

Special Provision	Reporting Requirements
Land Disposal Maximization Plan (Special Provision VI.C.3.a)	1 November , annually, once the Discharger has been authorized in writing by the Executive Officer to discharge at Discharge Point 001.

2. Within 60 days of permit adoption, the Discharger shall submit a report electronically via CIWQS submittal outlining RL's, MDL's, and analytical methods for the constituents listed in tables E-2, E-3, and E-6. The Discharger shall comply with the monitoring and reporting requirements for CTR constituents as outlined in sections 2.3 and 2.4 of the SIP. The maximum required RL's for priority pollutant constituents shall be based on the ML's contained in Appendix 4 of the SIP, determined in accordance with sections 2.4.2 and 2.4.3 of the SIP. In accordance with section 2.4.2 of the SIP, when there is more than one ML value for a given substance, the Central Valley Water Board shall include as RL's in the permit, all ML values and their associated analytical methods, listed in Appendix 4, that are below the calculated effluent limitation. The Discharger may select any one of those cited analytical methods for compliance determination. If no ML value is below the effluent limitation, then the Central Valley Water Board shall select as the RL, the lowest ML value and its associated analytical method, listed in Appendix 4, for inclusion in the permit. Table E-7 provides required maximum RL's in accordance with the SIP.
3. **Annual Operations Report.** By 1 February of each year, the Discharger shall submit a written report to the Central Valley Water Board Electronically via CIWQS submittal containing the following:

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- a. The names, certificate grades, and general responsibilities of all persons employed at the Facility.
- b. The names and telephone numbers of persons to contact regarding the plant for emergency and routine situations.
- c. A statement certifying when the flow meter(s) and other monitoring instruments and devices were last calibrated, including identification of who performed the calibration.
- d. A statement certifying whether the current operation and maintenance manual, and contingency plan, reflect the Facility as currently constructed and operated, and the dates when these documents were last revised and last reviewed for adequacy.
- e. The Discharger may also be requested to submit an annual report to the Central Valley Water Board with both tabular and graphical summaries of the monitoring data obtained during the previous year. Any such request shall be made in writing. The report shall discuss the compliance record. If violations have occurred, the report shall also discuss the corrective actions taken and planned to bring the discharge into full compliance with the WDR's.

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ATTACHMENT F – FACT SHEET

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ATTACHMENT F – FACT SHEET

As described in section II.B of this Order, the Central Valley Water Board incorporates this Fact Sheet as findings of the Central Valley Water Board supporting the issuance of this Order. This Fact Sheet discusses the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

This Order has been prepared under a standardized format to accommodate a broad range of discharge requirements for dischargers in California. Only those sections or subsections of this Order that are specifically identified as “not applicable” have been determined not to apply to this Discharger. Sections or subsections of this Order not specifically identified as “not applicable” are fully applicable to this Discharger.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the Facility.

Table F-1. Facility Information

WDID	5B050107004
CIWQS Facility Place ID	717684
Discharger	Calaveras County Water District and Sierra Golf Management Corporation
Name of Facility	Forest Meadows Wastewater Reclamation Plant
Facility Address	1040 Forest Meadows Drive
	Murphys, CA 95247
	Calaveras County
Facility Contact, Title and Phone	
Authorized Person to Sign and Submit Reports	Jesse Hampton, Acting Director of Operations, (209) 754-3316
Mailing Address	P.O. Box 846, San Andreas, CA 95249
Billing Address	Same as Mailing Address
Type of Facility	Publicly Owned Treatment Works (POTW)
Major or Minor Facility	Minor
Threat to Water Quality	3
Complexity	B
Pretreatment Program	Not Applicable
Recycling Requirements	Producer
Facility Permitted Flow	0.84 million gallons per day (MGD), average daily discharge flow
Facility Design Flow	0.19 MGD, average dry weather flow
Watershed	Upper Stanislaus
Receiving Water	Collierville Powerhouse Effluent Channel
Receiving Water Type	Inland Surface Water

- A. Calaveras County Water District (CCWD) is the owner and operator of the Forest Meadows Wastewater Reclamation Plant (hereinafter Facility), a POTW. Sierra Golf Management Corporation owns the reclaimed water storage facility and the golf course. Together, CCWD and Sierra Golf Management Corporation are hereinafter referred to as the Discharger.

For the purposes of this Order, references to the “discharger” or “permittee” in applicable federal and state laws, regulations, plans, or policy are held to be equivalent to references to the Discharger herein.

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- B. The Facility plans to discharge wastewater to the Collierville Powerhouse Effluent Channel via the Collierville Tunnel. The Collierville Powerhouse Effluent Channel is a water of the United States and tributary of the Stanislaus River within the Upper Stanislaus watershed. The Discharger was previously regulated by Order R5-2014-0011 and National Pollutant Discharge Elimination System (NPDES) Permit No. CA0085278 adopted on 7 February 2014, with an expiration date of 1 March 2019. Attachment B provides a map of the area around the Facility. Attachment C provides a flow schematic of the Facility.
- C. When applicable, state law requires dischargers to file a petition with the State Water Resources Control Board (State Water Board), Division of Water Rights and receive approval for any change in the point of discharge, place of use, or purpose of use of treated wastewater that decreases the flow in any portion of a watercourse. The State Water Board retains separate jurisdictional authority to enforce any applicable requirements under Water Code section 1211. This is not an NPDES permit requirement.
- D. The Discharger filed a report of waste discharge (ROWD) and submitted an application for reissuance of its waste discharge requirements (WDR's) and NPDES permit on **<Application Date>**. The application was deemed complete on **<Date Application Complete>**.
- E. Regulations at 40 C.F.R. section 122.46 limit the duration of NPDES permits to a fixed term not to exceed 5 years. Accordingly, Table 3 of this Order limits the duration of the discharge authorization. Under 40 C.F.R. section 122.6(d), states authorized to administer the NPDES program may administratively continue state-issued permits beyond their expiration dates until the effective date of the new permits, if state law allows it. Pursuant to California Code of Regulations (CCR), Title 23, section 2235.4, the terms and conditions of an expired permit are automatically continued pending reissuance of the permit if the Discharger complies with all federal NPDES requirements for continuation of expired permits.

II. FACILITY DESCRIPTION

The Discharger provides sewerage service for the community of Forest Meadows and serves a population of approximately 1,200. The design average dry weather flow capacity of the Facility is 0.19 MGD.

A. Description of Wastewater and Biosolids Treatment and Controls

The Facility consists of preliminary screening through a rotary strainer, a complete mix basin, a sludge-settling storage basin, two dissolved air flotation (DAF) thickeners, two continuous backwash sand filters, an ultraviolet light (UV) disinfection system, and an effluent storage pond. The Facility also includes on-site leachfields and an emergency storage pond to serve as a long-term plant reliability feature during periods of Facility repair. Tertiary treated wastewater is currently stored and reused for golf course irrigation by the Sierra Golf Management Corporation. Due to a lack of adequate storage and disposal capacity, the Discharger has requested to discharge tertiary treated effluent from the Facility to the Collierville Powerhouse Effluent Channel via the Collierville Tunnel at Discharge Point 001. The Collierville tunnel is the penstock of CCWD's North Fork Power Plant. The penstock is an 18-foot diameter, 8.5-mile long conduit connecting McKays Point Reservoir on the North Fork Stanislaus River and the Collierville Powerhouse, which discharges to an effluent channel approximately 1,000 feet upstream of the Stanislaus River (see Attachment B). This Order only regulates surface water discharges to the Collierville Powerhouse Effluent Channel, which may only occur during wet winters from 1 December through 15 May, when the wastewater flows exceed the Facility's effluent storage and disposal capacity. The Discharger's storage facilities and reclamation are covered under separate WDR's Order 5-00-066.

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The disposal of UV-disinfected tertiary treated effluent is currently accomplished solely by irrigation of the 42-acre Forest Meadows Golf Course. The Discharger anticipates the discharge to surface water would occur only during very wet years, when effluent flows are highest due to high infiltration and inflow, golf course irrigation needs are low, and winter and/or spring storage needs are high, and only when there is a threat of overflow from the storage reservoir.

Biosolids at the Facility are collected and stored in a holding tank prior to being dewatered on a belt press. Dewatered sludge is taken off-site for land disposal approximately once a year. Decant collected in the sludge holding tank is discharged back to the sludge-settling mixing basin and sent back through the DAF thickeners. Transportation and disposal/reuse of the biosolids is regulated by U.S. EPA under 40 C.F.R. part 503. The Discharger's solids handling are covered under separate WDR's Order 5-00-066.

B. Discharge Points and Receiving Waters

1. The Facility is located in Section 34, T4N, R14E, MDB&M, as shown in Attachment B, a part of this Order.
2. Treated municipal wastewater is discharged at Discharge Point 001 to the Collierville Powerhouse Effluent Channel, a water of the United States and tributary of the Stanislaus River, via the Collierville Tunnel, at a point latitude 38° 09' 41" N and longitude 120° 24' 51" W.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

Effluent limitations contained in Order R5-2014-0011 for discharges from Discharge Point 001 (Monitoring Location EFF-001) are as follows. The Discharger did not discharge at Discharge Point 001 during the term of Order R5-2014-0011; therefore, effluent monitoring data is not available.

Table F-2. Historic Effluent Limitations and Monitoring Data

Parameter	Units	Effluent Limitation		
		Average Monthly	Average Weekly	Maximum Daily
Flow	MGD	--	--	0.84 ¹
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	10	15	20
	lbs/day ²	70	105	140
	% Removal	85	--	--
pH	standard units	--	--	6.5 – 8.5
Total Suspended Solids	mg/L	10	15	20
	lbs/day ²	70	105	140
	% Removal	85	--	--
Copper, Total Recoverable	µg/L	2.5	--	4.9
Cyanide, Total (as CN)	µg/L	143	--	286
Lead, Total Recoverable	µg/L	0.52	--	1.0
Zinc, Total Recoverable	µg/L	23	--	47
Ammonia, Total (as N)	mg/L	13	--	27
	lbs/day ²	90	--	190
Total Coliform Organisms	MPN/100 mL	--	2.2 ³	23 ⁴ /240 ⁵
Acute Toxicity	% Survival	--	--	70 ⁶ /90 ⁷

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Parameter	Units	Effluent Limitation		
		Average Monthly	Average Weekly	Maximum Daily

- 1 Applied as an average daily discharge flow effluent limitation.
- 2 Based on an average daily discharge flow of 0.84 MGD.
- 3 Applied as a 7-day median effluent limitation.
- 4 Not to be exceeded more than once in any 30-day period.
- 5 Applied as an instantaneous maximum effluent limitation.
- 6 Minimum percent survival for any one bioassay.
- 7 Median percent survival of three consecutive acute bioassays.

D. Compliance Summary

The Discharger was not subject to any enforcement actions during the term of Order R5-2014-0011.

E. Planned Changes

As discussed in section II.A of this Fact Sheet, due to a lack of adequate storage and disposal capacity, the Discharger is planning to construct an outfall pipeline to the Collierville Tunnel. Design of the pipeline is complete; however, construction of the pipeline is not planned until necessary to accommodate growth within the service area.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in this Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order serves as WDR's pursuant to article 4, chapter 4, division 7 of the California Water Code (commencing with section 13260). This Order is also issued pursuant to section 402 of the federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. EPA and chapter 5.5, division 7 of the Water Code (commencing with section 13370). It shall serve as an NPDES permit for point source discharges from this Facility to surface waters.

B. California Environmental Quality Act (CEQA)

Under Water Code section 13389, this action to adopt an NPDES permit is exempt from the provisions of chapter 3 of CEQA, (commencing with section 21100) of division 13 of the Public Resources Code.

C. State and Federal Laws, Regulations, Policies, and Plans

1. **Water Quality Control Plans.** Requirements of this Order specifically implement the applicable Water Quality Control Plans.

- a. **Basin Plan.** The Central Valley Water Board adopted a *Water Quality Control Plan, Fourth Edition* (Revised July 2016), for the Sacramento and San Joaquin River Basins (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. Requirements in this Order implement the Basin Plan.

The Basin Plan at II-2.00 states that the beneficial uses of any specifically identified water body generally apply to its tributary streams. The Basin Plan in Table II-1, section II, does not specifically identify beneficial uses for the Collierville Powerhouse Effluent Channel, but does identify present and potential uses for the Stanislaus River from the source to the New Melones Reservoir, to which the

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Collierville Powerhouse Effluent Channel is tributary. In addition, the Basin Plan implements State Water Board Resolution 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for municipal or domestic supply (MUN). Thus, beneficial uses applicable to the Collierville Powerhouse Effluent Channel are as follows:

Table F-3. Basin Plan Beneficial Uses

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Collierville Powerhouse Effluent Channel	<u>Existing:</u> Municipal and domestic supply (MUN); agricultural supply, including irrigation and stock watering (AGR); hydropower generation (POW); water contact recreation, including canoeing and rafting (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); and wildlife habitat (WILD).

2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** U.S. EPA adopted the NTR on 22 December 1992, and later amended it on 4 May 1995 and 9 November 1999. About forty criteria in the NTR applied in California. On 18 May 2000, U.S. EPA adopted the CTR. The CTR promulgated new toxics criteria for California and, in addition, incorporated the previously adopted NTR criteria that were applicable in the state. The CTR was amended on 13 February 2001. These rules contain federal water quality criteria for priority pollutants.
3. **State Implementation Policy.** On 2 March 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on 28 April 2000, with respect to the priority pollutant criteria promulgated for California by the U.S. EPA through the NTR and to the priority pollutant objectives established by the Central Valley Water Board in the Basin Plan. The SIP became effective on 18 May 2000, with respect to the priority pollutant criteria promulgated by the U.S. EPA through the CTR. The State Water Board adopted amendments to the SIP on 24 February 2005, which became effective on 13 July 2005. The SIP establishes implementation provisions for priority pollutant criteria and objectives and provisions for chronic toxicity control. Requirements of this Order implement the SIP.
4. **Antidegradation Policy.** Federal regulation 40 C.F.R. section 131.12 requires that the state water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16 (*"Statement of Policy with Respect to Maintaining High Quality of Waters in California"*) (State Antidegradation Policy). The State Antidegradation Policy is deemed to incorporate the federal antidegradation policy where the federal policy applies under federal law. The State Antidegradation Policy requires that existing water quality be maintained unless degradation is justified based on specific findings. The Basin Plan implements, and incorporates by reference, both the state and federal antidegradation policies. The permitted discharge must be consistent with the antidegradation provision of 40 C.F.R. section 131.12 and the State Antidegradation Policy. The Central Valley Water Board finds this Order is consistent with the federal and State Water Board antidegradation regulations and policy.
5. **Anti-Backsliding Requirements.** Sections 402(o) and 303(d)(4) of the CWA and federal regulations at 40 C.F.R. section 122.44(l) restrict backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be

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as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed.

6. **Domestic Water Quality.** In compliance with Water Code section 106.3, it is the policy of the State of California that every human being has the right to safe, clean, affordable, and accessible water adequate for human consumption, cooking, and sanitary purposes. This Order promotes that policy by requiring discharges to meet maximum contaminant levels (MCL's) designed to protect human health and ensure that water is safe for domestic use.
7. **Endangered Species Act Requirements.** This Order does not authorize any act that results in the taking of a threatened or endangered species or any act that is now prohibited, or becomes prohibited in the future, under either the California Endangered Species Act (Fish and Game Code, §§ 2050 to 2097) or the Federal Endangered Species Act (16 U.S.C.A. §§ 1531 to 1544). This Order requires compliance with effluent limits, receiving water limits, and other requirements to protect the beneficial uses of waters of the state. The Discharger is responsible for meeting all requirements of the applicable Endangered Species Act.
8. **Emergency Planning and Community Right to Know Act.** Section 13263.6(a) of the Water Code requires that *"the Regional Water Board shall prescribe effluent limitations as part of the waste discharge requirements of a POTW for all substances that the most recent toxic chemical release data reported to the state emergency response commission pursuant to section 313 of the Emergency Planning and Community Right to Know Act of 1986 (42 U.S.C. sec. 11023) (EPCRA) indicate as discharged into the POTW, for which the State Water Board or the Regional Water Board has established numeric water quality objectives, and has determined that the discharge is or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to, an excursion above any numeric water quality objective"*.

The most recent toxic chemical data report does not indicate any reportable off-site releases or discharges to the collection system for this Facility. Therefore, a reasonable potential analysis (RPA) based on information from EPCRA cannot be conducted. Based on information from EPCRA, there is no reasonable potential to cause or contribute to an excursion above any numeric water quality objectives included within the Basin Plan or in any State Water Board plan, so no effluent limitations are included in this permit pursuant to Water Code section 13263.6(a).

However, as detailed elsewhere in this Order, available effluent data indicate that there are constituents present in the effluent that have a reasonable potential to cause or contribute to exceedances of water quality standards and require inclusion of effluent limitations based on federal and state laws and regulations.

9. **Storm Water Requirements.** U.S. EPA promulgated federal regulations for storm water on 16 November 1990 in 40 C.F.R. parts 122, 123, and 124. The NPDES Industrial Storm Water Program regulates storm water discharges from wastewater treatment facilities. Wastewater treatment plants are applicable industries under the storm water program and are obligated to comply with the federal regulations. The State Water Board does not require wastewater treatment facilities with design flows less than 1 MGD to obtain coverage under Water Quality Order 2014-0057-DWQ, General Permit for Storm Water Discharges Associated with Industrial Activities (NPDES General Permit No. CAS000001). Therefore, this Order does not regulate storm water.

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D. Impaired Water Bodies on CWA 303(d) List

1. Under section 303(d) of the 1972 CWA, states, territories and authorized tribes are required to develop lists of water quality limited segments (WQLS's). The waters on these lists do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. On 6 April 2018, U.S. EPA gave final approval to California's 2014 and 2016 section 303(d) List of Water Quality Limited Segments. The Basin Plan references this list of WQLS's, which are defined as "...those sections of lakes, streams, rivers or other fresh water bodies where water quality does not meet (or is not expected to meet) water quality standards even after the application of appropriate limitations for point sources (40 C.F.R. part 130, et seq.)." The Basin Plan also states, "Additional treatment beyond minimum federal standards will be imposed on dischargers to [WQLS's]. Dischargers will be assigned or allocated a maximum allowable load of critical pollutants so that water quality objectives can be met in the segment." Neither the Collierville Powerhouse Effluent Channel nor the Stanislaus River in the vicinity of the discharge are listed as impaired water bodies on the 2014 and 2016 303(d) list.
2. **Total Maximum Daily Loads (TMDL's).** At the time of this permit renewal, there are no approved TMDL's with waste load allocations (WLA's) that apply to this Facility.
3. The 303(d) listings and TMDL's have been considered in the development of the Order. A pollutant-by-pollutant evaluation of each pollutant of concern is described in section IV.C.3 of this Fact Sheet.

E. Other Plans, Policies and Regulations – Not Applicable

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

Effluent limitations and toxic and pretreatment effluent standards established pursuant to sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 304 (Information and Guidelines), and 307 (Toxic and Pretreatment Effluent Standards) of the CWA and amendments thereto are applicable to the discharge.

The CWA mandates the implementation of effluent limitations that are as stringent as necessary to meet water quality standards established pursuant to state or federal law [33 U.S.C., §1311(b)(1)(C); 40 C.F.R. § 122.44(d)(1)]. NPDES permits must incorporate discharge limits necessary to ensure that water quality standards are met. This requirement applies to narrative criteria as well as to criteria specifying maximum amounts of particular pollutants. Pursuant to federal regulations, 40 C.F.R. section 122.44(d)(1)(i), NPDES permits must contain limits that control all pollutants that "*are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality.*" Federal regulations, 40 C.F.R. section 122.44(d)(1)(vi), further provide that "[w]here a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits."

The CWA requires point source dischargers to control the amount of conventional, non-conventional, and toxic pollutants that are discharged into the waters of the United States. The control of pollutants discharged is established through effluent limitations and other requirements in NPDES permits. There are two principal bases for effluent limitations in the Code of Federal Regulations: 40 C.F.R. section 122.44(a) requires that permits include applicable technology-based limitations and standards; and 40 C.F.R. section 122.44(d) requires that permits include water quality-based effluent limitations (WQBEL's) to attain and maintain applicable numeric and

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narrative water quality criteria to protect the beneficial uses of the receiving water where numeric water quality objectives have not been established. The Basin Plan at page IV-17.00 contains an implementation policy, “*Policy for Application of Water Quality Objectives*,” which specifies that the Central Valley Water Board “*will, on a case-by-case basis, adopt numerical limitations in Orders which will implement the narrative objectives.*” This Policy complies with 40 C.F.R. section 122.44(d)(1). With respect to narrative objectives, the Central Valley Water Board must establish effluent limitations using one or more of three specified sources, including: (1) U.S. EPA’s published water quality criteria, (2) a proposed state criterion (i.e., water quality objective) or an explicit state policy interpreting its narrative water quality criteria (i.e., the Central Valley Water Board’s “*Policy for Application of Water Quality Objectives*”) (40 C.F.R. section 122.44(d)(1)(vi)(A), (B) or (C)), or (3) an indicator parameter.

The Basin Plan includes numeric site-specific water quality objectives and narrative objectives for toxicity, chemical constituents, discoloration, radionuclides, and tastes and odors. The narrative toxicity objective states: “*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life.*” (Basin Plan at III-8.00) The Basin Plan states that material and relevant information, including numeric criteria, and recommendations from other agencies and scientific literature will be utilized in evaluating compliance with the narrative toxicity objective. The narrative chemical constituents objective states that waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses. At minimum, “*... water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCL’s)*” in Title 22 of CCR. The Basin Plan further states that, to protect all beneficial uses, the Central Valley Water Board may apply limits more stringent than MCL’s. The narrative tastes and odors objective states: “*Water shall not contain taste- or odor-producing substances in concentrations that impart undesirable tastes or odors to domestic or municipal water supplies or to fish flesh or other edible products of aquatic origin, or that cause nuisance, or otherwise adversely affect beneficial uses.*”

A. Discharge Prohibitions

1. **Prohibition III.A (No discharge or application of waste other than that described in this Order).** This prohibition is based on Water Code section 13260 that requires filing of a ROWD before discharges can occur. The Discharger submitted a ROWD for the discharges described in this Order; therefore, discharges not described in this Order are prohibited.
2. **Prohibition III.B (No bypasses or overflow of untreated wastewater, except under the conditions at 40 C.F.R. section 122.41(m)(4)).** As stated in section I.G of Attachment D, Standard Provisions, this Order prohibits bypass from any portion of the Facility. Federal regulations, 40 C.F.R. section 122.41(m), define “bypass” as the intentional diversion of waste streams from any portion of a treatment facility. This section of the federal regulations, 40 C.F.R. section 122.41(m)(4), prohibits bypass unless it is unavoidable to prevent loss of life, personal injury, or severe property damage. In considering the Regional Water Board’s prohibition of bypasses, the State Water Board adopted a precedential decision, Order WQO 2002-0015, which cites the federal regulations, 40 C.F.R. section 122.41(m), as allowing bypass only for essential maintenance to assure efficient operation.
3. **Prohibition III.C (No controllable condition shall create a nuisance).** This prohibition is based on Water Code section 13050 that requires water quality objectives established for the prevention of nuisance within a specific area. The Basin Plan prohibits conditions that create a nuisance.

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4. **Prohibition III.D (No inclusion of pollutant free wastewater shall cause improper operation of the Facility's systems).** This prohibition is based on 40 C.F.R. section 122.41 et seq. that requires the proper design and operation of treatment facilities.
5. **Prohibition III.E (No discharge of hazardous waste).** This prohibition is based on CCR, Title 22, section 66261.1 et seq. that prohibits discharge of hazardous waste.
6. **Prohibition III.F (No discharges when the storage reservoir has 3.9 feet or more of available freeboard).** Initiation of discharge to the Collierville Powerhouse Effluent Channel via the Collierville Tunnel is prohibited until it is demonstrated that a direct discharge to surface water is necessary after maximizing land disposal, including golf course irrigation and utilization of on-site leachfields. Furthermore, maximum use of the golf course storage pond is required. Therefore, consistent with Order R5-2014-0011, this Order prohibits the discharge to surface waters when there is 3.9 feet or more of available freeboard in the storage pond.
7. **Prohibition III.G (No discharges except between 1 December and 15 May).** Due to lack of wintertime storage capacity, direct discharge to the Collierville Powerhouse Effluent Channel via the Collierville Tunnel is permitted only if and when necessary to prevent unauthorized overflows from the storage pond during extreme wet winters.
8. **Prohibition III.H (No discharges until compliance with Special Provision VI.C.4.c and Executive Officer approval).** The Discharger is proposing to construct an outfall to the Collierville Tunnel. Consistent with Order R5-2014-0011, Special Provision VI.C.4.c of this Order requires the Discharger to: (1) demonstrate compliance with the final effluent and receiving water limitations; (2) provide certification of completion by the design engineer that the outfall pipeline to the Collierville Tunnel is operational; (3) comply with the requirement to establish an electronic system for operator notification for continuous recording device alarms; and (4) submit a request for surface water discharge prior to commencement of surface water discharges to the Collierville Tunnel. Therefore, this Order prohibits discharges to surface water until the Discharger demonstrates compliance with these provisions and receives Executive Officer approval to discharge to the Collierville Tunnel at Discharge Point 001.
9. **Prohibition III.I (Average Daily Discharge Flow).** This prohibition is based on the design average daily discharge flow capacity of the proposed outfall, as discharges will only occur as necessary to prevent uncontrolled discharges from the storage pond. Previous Order R5-2014-0011 included flow as an effluent limit based on the design capacity of the proposed outfall. Flow is not a pollutant and therefore has been changed from an effluent limit to a discharge prohibition in this Order, which is an equivalent level of regulation. This Order is not less stringent because compliance with flow as a discharge prohibition will be calculated the same way as the previous Order.

B. Technology-Based Effluent Limitations

1. Scope and Authority

Section 301(b) of the CWA and implementing U.S. EPA permit regulations at 40 C.F.R. section 122.44 require that permits include conditions meeting applicable technology-based requirements, at a minimum, and any more stringent effluent limitations necessary to meet applicable water quality standards. The discharge authorized by this Order must meet minimum federal technology-based requirements based on Secondary Treatment Standards at 40 C.F.R. part 133.

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Regulations promulgated in 40 C.F.R. section 125.3(a)(1) require technology-based effluent limitations for municipal dischargers to be placed in NPDES permits based on Secondary Treatment Standards or Equivalent to Secondary Treatment Standards.

The Federal Water Pollution Control Act Amendments of 1972 (PL 92-500) established the minimum performance requirements for POTW's [defined in section 304(d)(1)]. Section 301(b)(1)(B) of that Act requires that such treatment works must, as a minimum, meet effluent limitations based on secondary treatment, as defined by the U.S. EPA Administrator.

Based on this statutory requirement, U.S. EPA developed secondary treatment regulations, which are specified in 40 C.F.R. part 133. These technology-based regulations apply to all municipal wastewater treatment plants and identify the minimum level of effluent quality attainable by secondary treatment in terms of biochemical oxygen demand (BOD₅), total suspended solids (TSS), and pH.

2. Applicable Technology-Based Effluent Limitations

- a. **BOD₅ and TSS.** Federal regulations at 40 C.F.R. part 133 establish the minimum weekly and monthly average level of effluent quality attainable by secondary treatment for BOD₅ and TSS. In addition, 40 C.F.R. section 133.102, in describing the minimum level of effluent quality attainable by secondary treatment, states that the 30-day average percent removal shall not be less than 85 percent. This Order contains a limitation requiring an average of 85 percent removal of BOD₅ and TSS over each calendar month. This Order requires WQBEL's that are equal to or more stringent than the secondary technology-based treatment described in 40 C.F.R. part 133 (see section IV.C.3.c of the Fact Sheet for a discussion on pathogens, which includes WQBEL's for BOD₅ and TSS).
- b. **pH.** The secondary treatment regulations at 40 C.F.R. part 133 also require that pH be maintained between 6.0 and 9.0 standard units. This Order, however, requires more stringent WQBEL's for pH to comply with the Basin Plan's water quality objectives for pH.

Summary of Technology-based Effluent Limitations Discharge Point 001

Table F-4. Summary of Technology-Based Effluent Limitations

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Conventional Pollutants						
Biochemical Oxygen Demand (5-day @ 20°C)	mg/L	30 ¹	45 ¹	--	--	--
	% Removal	85	--	--	--	--
pH	standard units	--	--	--	6.0 ¹	9.0 ¹
Total Suspended Solids	mg/L	30 ¹	45 ¹	--	--	--
	% Removal	85	--	--	--	--

¹ More stringent WQBEL's are applicable to the discharge and are included in this Order, as described further in section IV.C.3.c of this Fact Sheet.

C. Water Quality-Based Effluent Limitations (WQBEL's)

1. Scope and Authority

CWA section 301(b) and 40 C.F.R. section 122.44(d) require that permits include limitations more stringent than applicable federal technology-based requirements where necessary to achieve applicable water quality standards. This Order contains requirements, expressed as technology equivalence requirements, more stringent than secondary treatment requirements that are necessary to meet applicable water quality standards. The rationale for these requirements, which consist of tertiary treatment or equivalent requirements, is discussed in section IV.C.3 of this Fact Sheet.

Section 122.44(d)(1)(i) of 40 C.F.R. requires that permits include effluent limitations for all pollutants that are or may be discharged at levels that have the reasonable potential to cause or contribute to an exceedance of a water quality standard, including numeric and narrative objectives within a standard. Where reasonable potential has been established for a pollutant, but there is no numeric criterion or objective for the pollutant, WQBEL's must be established using: (1) U.S. EPA criteria guidance under CWA section 304(a), supplemented where necessary by other relevant information; (2) an indicator parameter for the pollutant of concern; or (3) a calculated numeric water quality criterion, such as a proposed state criterion or policy interpreting the state's narrative criterion, supplemented with other relevant information, as provided in section 122.44(d)(1)(vi).

The process for determining reasonable potential and calculating WQBEL's when necessary is intended to protect the designated uses of the receiving water, as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or any applicable water quality criteria contained in the CTR and NTR.

Finally, 40 C.F.R. section 122(d)(1)(vii) requires effluent limits to be developed consistent with any available WLA's developed and approved for the discharge.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

The Basin Plan designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan. In addition, the Basin Plan implements State Water Board Resolution 88-63, which established state policy that all waters, with certain exceptions, should be considered suitable or potentially suitable for MUN.

The Basin Plan on page II-1.00 states: "*Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning...*" and with respect to disposal of wastewaters states that "*...disposal of wastewaters is [not] a prohibited use of waters of the State; it is merely a use which cannot be satisfied to the detriment of beneficial uses.*"

CWA section 101(a)(2) states: "*it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water be achieved by July 1, 1983.*" Federal regulations, developed to implement the requirements of the CWA, create a rebuttable presumption that all waters be designated as fishable and swimmable. Federal regulations, 40 C.F.R. sections 131.2 and 131.10, require that all waters of the state be regulated to protect the beneficial uses of public water supply, protection and propagation of fish, shell fish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation. 40 C.F.R. section 131.3(e) defines

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existing beneficial uses as those uses actually attained after 28 November 1975, whether or not they are included in the water quality standards. Federal regulation, 40 C.F.R. section 131.10 requires that uses be obtained by implementing effluent limitations, requires that all downstream uses be protected, and states that in no case shall a state adopt waste transport or waste assimilation as a beneficial use for any waters of the United States.

- a. **Receiving Water and Beneficial Uses.** Refer to section III.C.1 above for a complete description of the receiving water and beneficial uses.
- b. **Effluent and Ambient Background Data.** Order R5-2014-0011 required effluent and receiving water monitoring only when discharges to surface water were occurring. Since no discharges to surface water occurred during the term of Order R5-2014-0011, updated effluent and receiving water monitoring data is limited to priority pollutant sampling conducted between December 2017 and February 2018. Samples collected from the Facility's storage reservoir were considered to be representative of the effluent to be discharged following construction of the outfall pipeline to the Collierville Tunnel. Where receiving water data was necessary to calculate pH-, temperature-, and hardness-dependent criteria (i.e., ammonia and CTR metals), monitoring conducted within the Collierville Tunnel between April 2004 and 15 May 2005 was also considered.
- c. **Assimilative Capacity/Mixing Zone**
 - i. **Regulatory Guidance for Dilution Credits and Mixing Zones.** The CWA directs the states to adopt water quality standards to protect the quality of their waters. U.S. EPA's current water quality standards regulation authorizes states to adopt general policies, such as mixing zones, to implement state water quality standards (40 C.F.R. sections 122.44 and 122.45). U.S. EPA allows states to have broad flexibility in designing mixing zone policies. Primary policy and guidance on determining mixing zones and dilution credits is provided by the SIP and the Basin Plan. If no procedure applies in the SIP or the Basin Plan, then the Central Valley Water Board may use the U.S. EPA *Technical Support Document for Water Quality-Based Toxics Control* (EPA/505/2-90-001)(TSD).

For non-priority pollutant constituents, the allowance of mixing zones by the Central Valley Water Board is discussed in the Basin Plan's "*Policy for Application of Water Quality Objectives*," which states, in part, "*In conjunction with the issuance of NPDES and storm water permits, the Regional Board may designate mixing zones within which water quality objectives will not apply provided the discharger has demonstrated to the satisfaction of the Regional Board that the mixing zone will not adversely impact beneficial uses. If allowed, different mixing zones may be designated for different types of objectives, including, but not limited to, acute aquatic life objectives, chronic aquatic life objectives, human health objectives, and acute and chronic whole effluent toxicity objectives, depending in part on the averaging period over which the objectives apply. In determining the size of such mixing zones, the Regional Board will consider the applicable procedures and guidelines in the EPA's Water Quality Standards Handbook and the [TSD]. Pursuant to EPA guidelines, mixing zones designated for acute aquatic life objectives will generally be limited to a small zone of initial dilution in the immediate vicinity of the discharge.*"

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For priority pollutants, the SIP supersedes the Basin Plan mixing zone provisions. Section 1.4.2 of the SIP states, in part, "...with the exception of effluent limitations derived from TMDL's, in establishing and determining compliance with effluent limitations for applicable human health, acute aquatic life, or chronic aquatic life priority pollutant criteria/objectives or the toxicity objective for aquatic life protection in a basin plan, the Regional Board may grant mixing zones and dilution credits to dischargers...The applicable priority pollutant criteria and objectives are to be met through a water body except within any mixing zone granted by the Regional Board. **The allowance of mixing zones is discretionary and shall be determined on a discharge-by-discharge basis.** The Regional Board may consider allowing mixing zones and dilution credits only for discharges with a physically identifiable point of discharge that is regulated through an NPDES permit issued by the Regional Board." [emphasis added]

For incompletely-mixed discharges, the Discharger must complete an independent mixing zone study to demonstrate to the Central Valley Water Board that a dilution credit is appropriate. In granting a mixing zone, section 1.4.2.2 of the SIP requires the following to be met:

"A mixing zone shall be as small as practicable. The following conditions must be met in allowing a mixing zone: [emphasis added]

A: A mixing zone shall not:

1. compromise the integrity of the entire water body;
2. cause acutely toxic conditions to aquatic life passing through the mixing zone;
3. restrict the passage of aquatic life;
4. adversely impact biologically sensitive or critical habitats, including, but not limited to, habitat of species listed under federal or State endangered species laws;
5. produce undesirable or nuisance aquatic life;
6. result in floating debris, oil, or scum;
7. produce objectionable color, odor, taste, or turbidity;
8. cause objectionable bottom deposits;
9. cause nuisance;
10. dominate the receiving water body or overlap a mixing zone from different outfalls; or
11. be allowed at or near any drinking water intake. A mixing zone is not a source of drinking water. To the extent of any conflict between this determination and the Sources of Drinking Water Policy (Resolution 88-63), this SIP supersedes the provisions of that policy."

Section 1.4.2.1 of the SIP establishes the authority for the Central Valley Water Board to consider dilution credits based on the mixing zone conditions in a receiving water. Section 1.4.2.1, in part, states:

"The dilution credit, *D*, is a numerical value associated with the mixing zone that accounts for the receiving water entrained into the discharge. The dilution

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